

Appl. No. 10/803,945
Amendment dated July 2, 2007
Response to Final Office Action mailed March 1, 2007

Docket No. TSM-37

REMARKS

Pending Claims

Claims 7, 9-11, 14-17, 19 and 21-28 are pending in this application.

Claim Rejections under 35 U.S.C. §102

Claims 7, 9-11, 14-17 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,483,649 to Kuznetsov et al. Applicants request reconsideration of the rejection for the following reasons.

Applicants have amended claims to clarify the differences between the claimed invention and that of the prior art reference to Kuznetsov et al. In particular, Applicants have amended the preamble of the claim to clarify that the host computer is coupled to and separate from the storage system, and that the data protection apparatus is coupled to and separate from the host computer and the storage system. This arrangement is shown in Figures 6 and 7 of the application, for example.

Further, the claims have been amended to set forth that the first volume is for storing data received from the host computer and the second volume is a pair of the first volume and is for storing data that is replicated from the first volume. This is also shown by the relationship between volumes of (first) storage areas 64 and (second) storage areas 67 in Figure 6; and (first) storage areas 64 and (second) storage areas 67a, 67b and 67c in Figure 7. It is also clear from amended claim 7, for example, that the event detection unit, replication stopping unit, and illegal intrusion detection unit are part of the data protection apparatus,

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which is coupled to and separate from the host computer and the storage system.

As set forth in the present application, the data protection unit 74 has a function of stopping data reflection or replication from a (first) storage volume 64 onto the replicated (second) volume 67 (Figure 6) or (second) storage volumes 67a – 67c (Figure 7). When an event detection unit detects an event or receives a detection of illegal intrusion from the illegal intrusion detection unit, the data replication from the storage volume 64 onto the replicated volume 67 is stopped. It is not necessary to disconnect the path between the host 40 and the storage volume 64 since the data in the storage area 64 is maintained as duplicated data in the storage volume 67 and any problem with the data in storage volume 64 is not transferred to the storage volume 67 as a result of the stopping the replication of data. Further, as set forth in claim 15, for example, there is a delay in the replication of data by the storage control unit from the first volume to the second volume, which provides additional time to detect the event, such as an illegal intrusion, and stop the replication of data from the first volume to the second volume before the data held in the storage volume 64 is damaged and transferred to the replicated volume 67. See page 19, lines 3-16 of the Specification, for example.

Unlike the present invention, Kuznetsov is primarily directed to a personal computer system which runs protection software (protection-program support module 120B) that protects files from inadvertent or intentional distortion. Applicants have set forth in the claims that the host computer, storage system and data protection apparatus are coupled to and separate from one another to distinguish the claimed invention from the protection

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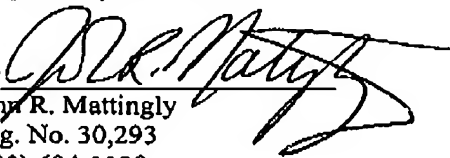
provided by module 120B which blocks access paths to a hard disk controller 30, which controls hard disk 32, when "dangerous requests" are detected.

Further, Applicants respectfully assert that the hard disk 32 and memories 122, 126 of Kuznetsov, which are in the same PC, are not equivalent to the claimed first and second storage volumes of a storage system, particularly because memories 122, 126 do not constitute a second volume that receives replication data from a first volume, wherein the second volume is a pair of the first volume, as claimed. Further, hard disk 32 does not store data received from a host computer as in the present invention. Accordingly, reconsideration of the rejection is respectfully requested.

Conclusion

In view of the foregoing, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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